

# SHORT COMMUNICATION

## Flaminia, a self-incompatible peach variety

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**ABSTRACT:** This study showed that the peach variety Flaminia is self-incompatible in Northern Greece, and it produces fruits only after cross fertilization. Among the peach varieties Doukessa, Fayette, Late Naoussas, Princess Anne and Autumn Free used as pollinators, the peach variety Fayette was found as the best in Northern Greece.

**Keywords:** pollinators; peach varieties; self-fertilization

The peach is considered to be a self-fertile fruit species although some sterile and male sterile varieties have been registered (SZABÓ et al. 2000). The peach variety Flaminia is a hybrid of Fayette × Fairtime and is widely grown in the USA and Europe. It produces fruits of high quality and quantity with very good postharvest behavior (RAGNI et al. 2001). In Northern Greece, Flaminia fruits ripen in mid-September. This variety is considered as one of the best late varieties, and it is promoted by the Greek Ministry of Agriculture to replace old varieties in Northern Greece. Flaminia was found to be self-sterile in Hungary (SZABÓ et al. 2000). However, BAJMETOV (1988) reported that peach varieties showed considerable variation in self-compatibility from year to year and place to place. The aim of this study was to test if Flaminia is a self-incompatible variety in Northern Greece. Furthermore, the peach varieties Doukessa, Fayette, Late Naoussas, Princess Anne and Autumn Free were tested as possible pollinators for Flaminia.

Table 1. Percentages of blossom fertilizations of the peach variety Flaminia by different pollinators, self-pollination and open self-pollination

Treatments	Percentage of pollinated blossoms	
Fayette	75	a*
Doukessa	36	d
Late Naoussas	55	c
Princess Anne	49	c
Autumn Free	52	c
Self-pollination	0	e
Open self-pollination	65	b

\*The values followed by different letters are significantly different ( $P = 0.05$ ) according to Duncan's Multiple Range Test

All the experiments were conducted for three consecutive years (1996–1998) in the experimental field of the Pomology Institute, Naoussa, where a peach orchard planted with the variety Flaminia was available. One hundred blossoms of each tree were artificially pollinated with pollen from Doukessa, Fayette, Late Naoussas, Princess Anne or Autumn Free according to the method described by STYLIANIDES (1979). In some trees, cages were used to cover one hundred untreated blossoms per tree to test if Flaminia is a self-compatible variety. In addition, there were untreated trees that were used as the control. The experimental design was randomized. There were seven treatments (five peach varieties as pollinators, uncovered control, covered trees with cages) each with fifteen replications (trees).

The results showed that the percentage of self-fertilization was zero throughout the experiments (Table 1). The highest percentage of fruit set was observed on trees pollinated by Fayette and the lowest on trees pollinated by Doukessa. The varieties Late Naoussas, Princess Anne and Autumn Free gave quite good results. Naturally pollinated trees had a high percentage of fruit set, but the percentage was lower than in the trees pollinated by Fayette. According to NYÉKI et al. (1998), natural self-pollination produces a lower fruit set than artificial self-pollination. It is possible that the different peach varieties, which were established around the experimental orchard, could be used as pollinators for the untreated trees.

This study proved that Flaminia is a self-incompatible variety in Northern Greece. Similarly, SZABÓ et al. (2000) found that Flaminia is a self-sterile peach variety in Hungary. SZABÓ et al. (1996) reported that the anthers of Flaminia did not contain pollen. Therefore, Flaminia should be planted in orchards together with one or more pollinators such as Fayette.

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## Flaminia, cizosprašná odrůda broskvoně

**ABSTRAKT:** Studium ukázalo, že odrůda broskvoně Flaminia je v podmínkách severního Řecka zcela cizosprašná a přináší plody pouze po křížovém opylení. Z testovaných odrůd broskvoní použitých jako opylovače pro tuto odrůdu (Doukessa, Fayette, Late Naoussas, Princess Anne a Autumn Free) byla zjištěna jako nejvhodnější pro podmínky severního Řecka odrůda Fayette.

**Klíčová slova:** opylovači; odrůdy broskvoně; samosprašnost

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